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10/609,250	06/26/2003	Venkat Selvamanickam	1014-SP101-US	7760

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LARSON NEWMAN ABEL POLANSKY & WHITE, LLP
5914 WEST COURTYARD DRIVE
SUITE 200
AUSTIN, TX 78730

EXAMINER

KACKAR, RAM N

ART UNIT	PAPER NUMBER
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1792

MAIL DATE	DELIVERY MODE
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10/07/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 8/18/2008 has been entered.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 26, 28-30 and 32-46 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In this instance phrase “gas channels having a length and a substantially uniform width” is new matter as not supported by the specification. Further, according to drawing (Fig 3) the channels narrow at the tip.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 26, 28-30, 32-46 and 48-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lijima et al (2001/0006042) in view of Vaidya et al (US 5076203).

Lijima et al disclose a process used for making a buffer layer of yttrium stabilized zirconia (YSZ) or MgO for a superconducting film (Abstract and paragraph 71) using ion assist (39) and teach cooling and positioning a translating substrate (tape like) which could comprise metal like nickel (Paragraph 59) in a deposition chamber for vacuum deposition (abstract and Fig 3), gas inlet (38), source of deposition material (36), means of delivering the deposition material (ion beam -38), means of translating a substrate (24,25), means of positioning the substrate so that deposition material impinges on the substrate (23).

Lijima et al teach that the measure of biaxial texture is FWHM (full width at half maximum) and that it could be minimum at an incidence angle of 50-60 degrees (paragraph 16, 87 and 99). Further Lijma et al disclose various parameters affecting FWHM and disclose it could be below 10 degrees (Fig 13).

Lijima et al do not disclose cooling by injecting gas through gas channels of the substrate block

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Vaidya et al disclose a process for cooling and positioning a translating substrate in a deposition chamber for vacuum deposition (Col 1 lines 8-11), gas inlet (Fig 1-17, Fig 6-30), source of deposition material (Fig 6-27), means of delivering the deposition material (electron – beam heater (Col 3 line 35), means of translating a substrate (Fig 6-22) from 0-90 meters per min (Abstract), curved means of positioning the substrate so that deposition material impinges on the substrate (23) whereas the substrate positioning means contains internal liquid coolant channels (23a and 23b) and internal gaseous coolant delivery channels (Fig 6-30, Fig 7-Fig 10 and Col 6 lines 5-68) which could use oxygen or argon to allow the temperature from 0 degrees C upwards.

Vaidya et al teach that gas introduction between the support and tape improves thermal coupling between the web and the support and reduces the coefficient of friction between the two (Abstract).

Therefore it would have been obvious for one of ordinary skill in the art at the time of invention to have injecting gas through gas channels of the substrate block for improved thermal coupling and cooling between the web and the support and reduces the coefficient of friction between the two (Abstract).

Regarding the gas channels extending to the first surface and being hollow and open along an entirety of said length, Fig 7-Fig 10 show gas channels, which extend to the first surface through the pores in the porous material since they allow the flow to reach the first surface. It is inherent that the pores work because they are connected to each other continuously up to the surface and they must be hollow to allow the flow to take place.

Regarding claim 26 the channels being of uniform width, the width of gas channels in Vaidya et al are uniform at least behind the porous part. Further the uniformity of width including spacing between channels is to make sure of uniformity of gas ejection behind the tape substrate. The structure disclosed in Fig 7- Fig 10 works in the same way and is equivalent and therefore obvious.

Regarding claim 48 channels being straight and equally spaced basically work the same way as disclosed in Vaidya to eject gas uniformly and perpendicularly to the substrate and is therefore equivalent and obvious.

Regarding claims 49 and 50 it appears that the diameter pertains to channels. In this situation disclosed pores are the channels to allow the flow and their size is a matter of optimization since they determine the flow, which is a process requirement.

Response to Arguments

Applicant's arguments filed 8/18/2008 have been fully considered but they are not persuasive.

Applicant's arguments regarding the added limitation are addressed in the rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ram N. Kackar whose telephone number is 571 272 1436. The examiner can normally be reached on M-F 8:00 A.M to 5:P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Parviz Hassanzadeh can be reached on 571 272 1435. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Ram N Kackar/
Primary Examiner, Art Unit 1792